DOCUMENT RESUME

ED 424 231 SP 038 201

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TITLE	Information Literacy and Teacher Education. ERIC Digest.
INSTITUTION	ERIC Clearinghouse on Teaching and Teacher Education, Washington, DC.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	EDO-SP-97-4
PUB DATE	1998-11-00
NOTE	4p.
CONTRACT	RR93002015
PUB TYPE	ERIC Publications (071) -- ERIC Digests in Full Text (073)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Elementary Secondary Education; Higher Education; *Information Literacy; *Information Processing; *Inservice Teacher Education; *Preservice Teacher Education; Teacher Education Curriculum; *Teaching Methods
IDENTIFIERS	American Association of School Librarians; Association of College and Research Libraries; ERIC Digests; *Information Integration

ABSTRACT

Teachers cannot prepare their students to be information literate unless they themselves understand how to find and use information. This Digest discusses the concept of information literacy (the ability to access, evaluate, and use information from a variety of sources) and its relevance for teachers. Professional associations for K-12 and higher education have recognized the importance of information literacy to the teaching-learning process. Two major associations for librarians who work with preservice and inservice teachers have developed guidelines on what information-literate teachers need to know. The guidelines emphasize skills for searching, retrieving, and evaluating information, and developing strategies for locating databases, Internet resources, and print materials. Existing models for teachers' information literacy include: individual workshops for both preservice and inservice teachers; course-related and course-integrated instruction; and the use of case studies of teaching and learning situations. Teacher educators, teachers, and others interested in preparing K-12 students to be information literate can move forward by reflecting upon and adapting existing models. (Contains 10 references) (LL)

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NOVEMBER 1998
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97/4

Information Literacy and Teacher Education

Jo Ann Carr

Introduction

"Critical thinking skills," "problem solving," "decision making": both the popular and professional literature use these phrases in reporting on skills that the K-12 curriculum must provide to equip students for the 21st century. All three of these phrases refer to cognitive skills that are necessary to create new knowledge and to learn how to learn. A recognition that learning how to learn is fundamental to economic and personal success in the information age has been cited by sources as diverse as Alvin Toffler and the Secretary's Commission on Achieving Necessary Skills (SCANS) and Goals 2000 reports (Doyle, 1994). This ability to learn how to learn is a key characteristic of those who are information literate; i.e., those who "know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them" (American Library Association [ALA], 1989, p. 2). If teachers are to use information so that others can learn from them, then teachers must be information literate. This Digest will discuss the concept of information literacy (the ability to access, evaluate, and use information from a variety of sources) and its relevance for teachers.

Rationale for Information Literacy for Teachers

The American Library Association Presidential Committee on Information Literacy recognized that the "information age is divorced from most teaching styles" (ALA, 1989, p. 12). In its report, the ALA Presidential Committee called for a restructuring of the learning process in order to create a new information-age school characterized by interactive, self-initiated learning with the teacher as the guide to learning. In March 1998, the National Forum on Information Literacy (NFIL), a broad-based association of over 65 national organizations, issued *A Progress Report on Information Literacy* in which they reported on the status of the recommendations of the 1989 report. Recommendation five from the 1989 report stated: "Teacher education and performance expectations should be modified to include information literacy concerns." Progress reported in 1998 on this recommendation was: "none" (National Forum, 1998, p. 5). The lack of progress is especially notable given the changes in technology for accessing information in the intervening years. This increase in information technology has resulted in the development of new standards, which deal in whole or in part with information literacy skills for K-12 students, by other professional associations.

The International Society for Technology in Education National Educational Technology Standards Project (NETS) has begun a multi-year effort to "effectively support use of technology for teaching-learning and administration" (Thomas, 1998, p. 11). Their first set of standards focuses on a technology foundation for students and includes the use of technology research tools "to locate, evaluate and collect information from a variety of sources" and to "evaluate and select information resources" (Thomas, 1998, p. 22). In June 1998, the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology released *Information Literacy Standards for Student Learning*, which addresess issues in information literacy, independent learning, and social responsibility, as a guide for "school library media specialists and other K-12 educators as they cultivate and refine their students' information literacy skills in print, nonprint and electronic format" (*Information Literacy Standards*, 1998). Teachers cannot prepare their students to be information literate unless they themselves understand how to find and use information.

The Commission on Higher Education of the Middle States Association of Colleges and Schools has been implementing standards for information literacy at the institutional level for some years. The association offers professional development workshops on this topic in conjunction with its national meetings.

This need to know not just content but also the process of learning is supported not only by the exploding amount of information but also by new understandings of cognitive science. Recent studies in cognitive science refute the notion that content comes before process, recognizing that the process of accessing, evaluating, and using information is integral to understanding content. The information-literate teacher will also be able to select and use resources most appropriate to multiple intelligences and learning styles (Warmkessel & McCade, 1997).

Guidelines for Information Literacy for Teachers

The two major professional associations for librarians who work with preservice teachers and inservice teachers have each developed guidelines and position statements on what information-literate teachers need to know. The Education and Behavioral Sciences Section (EBSS) of the Association of College and Research Libraries (ACRL) places emphasis on conceptually based skills for searching, retrieving, and evaluating information for learners who are undergraduate students, graduate students, practitioners, and researchers. The EBSS identifies a sequence of skills that begins with understanding that the generation and communication of knowledge in education includes recorded and unrecorded sources and formats that differ in publication cycles and authority. The process of intellectual access includes the development of a strategy for locating information that takes into consideration the different terminologies and organization of access tools such as databases, Internet resources, and print materials. This intellectual access is improved by an understanding of the citation, URL, or other bibliographic representation for information sources, which then guides the educator to physical access and

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evaluation of information sources. Lastly, the EBSS skills highlight the importance of the collaborative roles of teachers and library media specialists in developing assignments that will provide opportunities for K-12 students to refine their own information literacy skills (Libutti & Gratch, 1995, pp. 123-26).

The American Association of School Librarians issued a 1995 position paper on information competencies that stresses application rather than concepts. The paper recognizes the different roles of the administrator and the teacher in providing the integration of information literacy into the curriculum, supporting collaboration in planning and teaching among teachers and school library media specialists, and providing access to and using resource-based learning experiences, as well as notes the value of literature and technology as resources for student learning.

Models for Teachers' Information Literacy

Programs in information literacy for teachers range from individual workshops for both preservice and inservice teachers to course-related and course-integrated instruction. This breadth in program development and focus is illustrated in *Teaching Information Retrieval and Evaluation Skills to Education Students and Practitioners: A Casebook of Applications* (Libutti & Gratch, 1995). Ten case studies of teaching and learning situations for preservice and inservice teachers provide lesson plans and objectives, a session narrative, and a reflection on each case. These cases present reflective examples of programs that present instruction on such topics as resource-based teaching for student teachers, Internet searching for graduate education students, and conducting a literature review in preparation for a test critique. The cases develop these diverse themes in programs that range from a one-hour workshop to a semester course. Common themes emerging from these cases that are important to those developing information literacy programs for teachers are the heterogeneity of graduate students in education, the breadth and complexity of information resources in education, the impact of the World Wide Web on the need for exploration and evaluation, and a needed emphasis on teaching how to search for information using a variety of strategies.

The development of an integrated information literacy program for preservice teachers is described by Miner, whose program was focused on "preparing prospective teachers for ongoing self-renewal in terms of life-long learning" (1992, p. 259). This program at Brigham Young University began with independent workshops and, through revision based on the needs of student teachers, moved to a full-course, integrated program. Key to the success and growth of this program was the development of integrated course activities that would "fulfill course objectives at the same time they enhanced the planned development of . . . information literacy" (Miner, 1992, pp. 266-267).

O'Hanlon has provided a model for information literacy for teachers that emphasizes collaborative and problem-solving activities relevant to the student teacher. This model offers a guided design, which is based on Bloom's Taxonomy, and approximates real-life experience while modeling efficient practice in locating appropriate information sources (O'Hanlon, 1988).

Conclusion

Professional associations for K-12 and higher education have recognized the importance of information literacy to the teaching-learning process. However, integration of information literacy into teacher preparation and development has not occurred. In moving towards this goal, the *Progress Report on Information Literacy* identified two specific courses of action. The first is "to encourage leaders in school reform movements to incorporate information literacy skills into their efforts" and the second is "to partner with national teacher education organizations to get information literacy on their agendas" (National Forum, 1998, p. 7). Teacher educators, teachers, and others interested in preparing K-12 students to be information literate can move forward by reflecting upon and adapting existing models.

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OERI This publication was prepared with funding from the Office of Educational Research and Improvement, U. S. Department of Education, under contract number RR93002018. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or the Department.

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